COMP1400
Prac and Final Exam

Prac Exam

- Held in regular lab times
- The same as mid-semester Prac exam
  - full two hours
  - Each question has its own project
- One A4 page of notes allowed
- Three questions

Hints

- Read the questions carefully and do EXACTLY what is asked
- use the names of files, classes and methods EXACTLY as in the question
- If we say a method *returns* a value then return it, don't print it
- If we say, print it, don't return it!

Three questions

- Write an algorithm
- Use objects
- Create objects

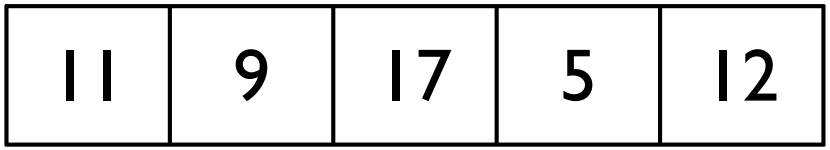
Written Exam

- Part A
  - 20 multiple choice questions
- Part B
  - 7 short answer questions, *not* equal value
  - may be given code and you must explain how it works or what it outputs

Test

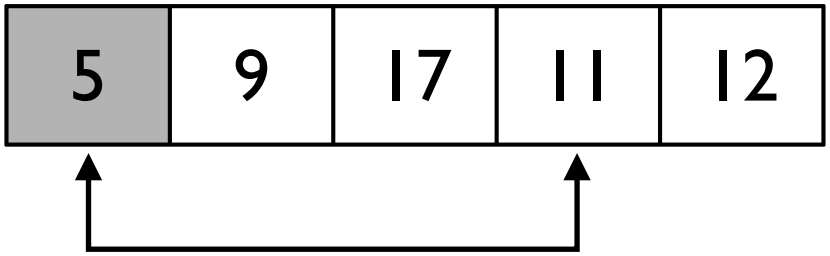
Swap two elements in an array

- Swap elements 0 and 3



Swap two elements in an array

- Swap elements 0 and 3



Swap two elements in an array

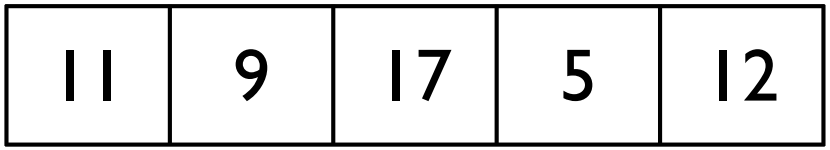
```
public static void swap(int[] a, int i, int j)
```

Swap two elements in an array

```
public static void swap(int[] a, int i, int j)
{
    int temp = a[i];
    a[i] = a[j];
    a[j] = temp;
}
```

Bubble Sort

- If adjacent pairs out not in order swap them



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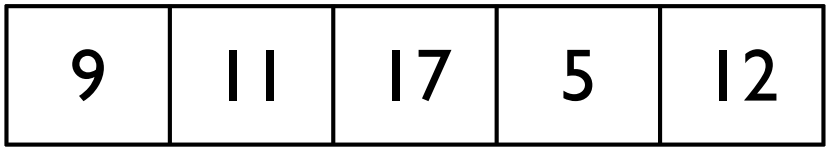

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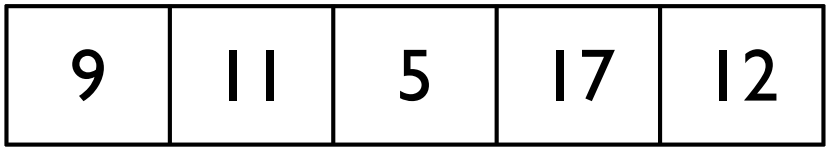

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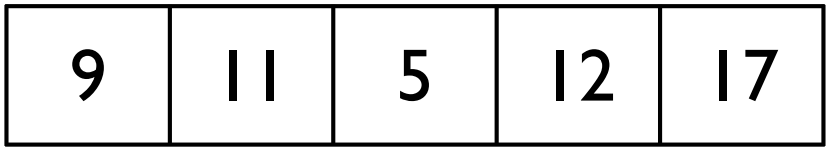
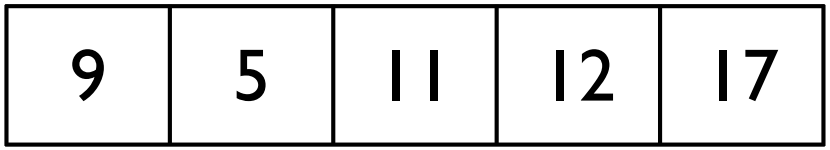


Bubble Sort

- Repeat the process until there are no more elements to swap



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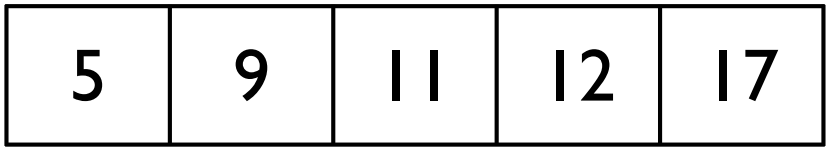

Sort an array

```
public static void bubbleSort(int[] data)
```

Sort an array

```
public static void bubbleSort(int[] data)
{
    boolean swap = true;

    while (swap)
    {
        swap = false;
        for (int i = 0; i < data.length-1; i++)
        {
            if (data[i] > data[i+1])
            {
                swap(data, i, i+1);
                swap = true;
            }
        }
    }
}
```

Hunt the Wunpus

```
public class Room
{
    public final int NORTH = 0;
    private Room rooms[4];

    rooms[Room.NORTH]
}
```